

Virtual World Editor, Phase I

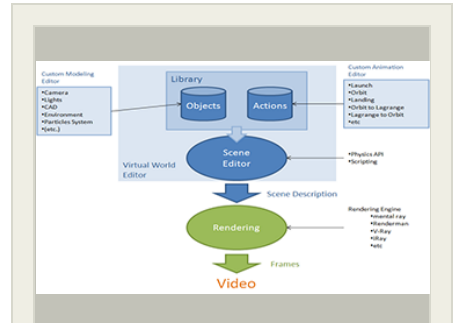
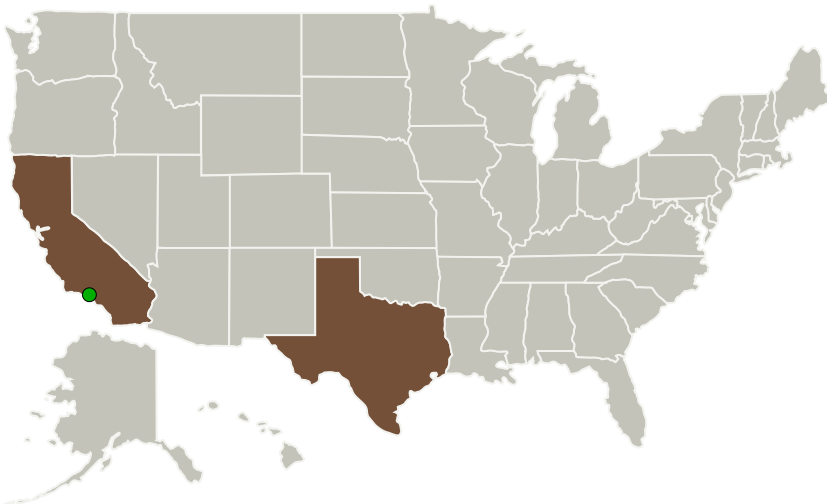
Completed Technology Project (2015 - 2016)



Project Introduction

NASA has identified a need for a tool that will give a non-expert the ability to quickly create animation of a mission scenario. This type of depiction can be important during a mission's development phase. Animation can show things that are not possible to see in the physical world and can help explain difficult concepts. Animation allows visualization of the mission without having to understand all the physics required. The communication of any mission scenarios through the medium of video - be it live action or animation - requires a particular set of skills: most notably, a sense of timing and layout. The sense of timing in animation can be compared to that of music; length, rhythm and order are the crucial elements for an effective delivery of an idea or emotion. Professional animators acquire this knowledge through formal training, education and years of experience. Although it would be impossible to impart this knowledge instantaneously, with current technology it can be encapsulated within a set of "digital elements" that can be manipulated and arranged to form a coherent stream of images (video) with order and meaning. Our proposed innovation is to develop a set of tools that can be used by a non-expert to build a virtual mission scenario that can be used for analysis, presentations and outreach. We will create a method for developing a collection of elements (objects, actions) with initial focus, space mission specific. The toolset will have elements that have the animation expertise incorporated. This will reduce the need for the user to have animation experience.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
● Jet Propulsion Laboratory(JPL)	Supporting Organization	NASA Center	Pasadena, California
University of Houston-Clear Lake	Supporting Organization	Academia	Houston, Texas

Primary U.S. Work Locations

California	Texas
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Project Transitions

▶ **June 2015:** Project Start

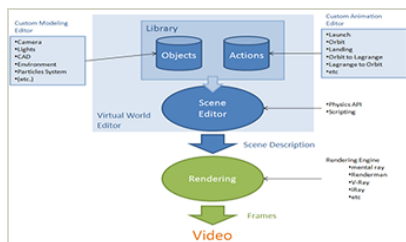
✓ **June 2016:** Closed out

Closeout Summary: Virtual World Editor, Phase I Project Image

Closeout Documentation:

- Final Summary Chart Image(<https://techport.nasa.gov/file/139548>)

Images

**Briefing Chart Image**

Virtual World Editor, Phase I
(<https://techport.nasa.gov/image/133784>)

**Final Summary Chart Image**

Virtual World Editor, Phase I Project Image
(<https://techport.nasa.gov/image/125832>)

Project Management

Program Director:

Jason L Kessler

Program Manager:

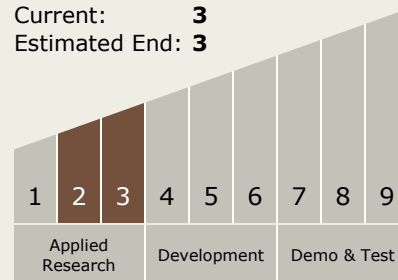
Carlos Torrez

Principal Investigator:

Marco Zambetti

Technology Maturity (TRL)

Start: **2**
Current: **3**
Estimated End: **3**



Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
 - TX11.1 Software Development, Engineering, and Integrity
 - TX11.1.7 Frameworks, Languages, Tools, and Standards

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Target Destinations

The Sun, Earth, The Moon,
Mars, Others Inside the Solar
System, Outside the Solar
System